

What we claim is:

1. Bio-decomposable polymer composition showing good thermal decomposition, wherein a drop of weight-average molecular controls within 30 % of the initial after treatment of molding and radial sterilization, by adding free radical scavenger to the bio-decomposable polymer.
2. Bio-decomposable polymer composition of the claim 1, wherein the free radical scavenger is selected from the oxidizing resistance agent group consisting of polyphenols, tannic acids, or gallic acids, vitamin group consisting of Vitamin E or Vitamin C, or triarylisocyanulate.
3. The bio-decomposable polymer composition of claim 1 wherein the composition is produced at not 50-degree Centigrade higher than melting temperature of the bio-decomposable polymer.
4. The bio-decomposable polymer composition of claim 1 wherein the composition is produced in a dose of radial rays range of 1.0 to 3.0Mrad at sterilization.
5. The bio-decomposable polymer composition of claim 1 wherein the polymer is selected from the group consisting of poly-glycolic acid, poly-lactic acid, poly-dioxanon, gelatin, hyaluronic acid, collagen, poly-amino acid, poly-caprolacton, copolymer of lactic and glycolic acid, Copolymer of lactic acid and caprolacton, copolymer of glycolic acid and caprolacton, poly-hydroxybutylate, chitin, albumin, or chitosan.

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